Personal Library Software

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FOR IMMEDIATE RELEASE

Personal Library Software Joins the CommerceNet Consortium
Participation in Working Groups to Help Shape the Future of Electronic Commerce

(Rockville, MD, June 14, 1995) -- Personal Library Software Inc., (PLS), announced today that it has joined CommerceNet as an associate member. PLS plans to participate in working groups that are on the leading edge of designing electronic commerce solutions for the Internet and contribute its extensive resources in intelligent full-text retrieval technology.

CommerceNet was formed in 1994 to facilitate the use of an Internet-based architecture for electronic commerce. The objective of the organization is to develop solutions that allow efficient interactions among customers, suppliers and development partners by decreasing time to market and reducing the overall costs of doing business. The consortium provides a forum for industry leaders to discuss issues, deploy pilot applications, and define standards and best business practices for using the Internet for electronic commerce. "We're pleased to welcome PLS into the consortium," said Cathy Medich, executive director of CommerceNet. "PLS is a valuable addition to CommerceNet, and especially into the Directories and Electronic Catalogs Working Group, where they will be able to share their experience and expertise in intelligent text retrieval and electronic publishing."

As a member of the consortium, PLS will dedicate resources and be most active in the Directories/Electronic Catalogs working group, which is one of the nine major areas of CommerceNet concentration. PLS will apply its vast information management knowledge gained over the last 12 years, in cooperation with the various member companies, to develop real-world solutions to conducting business on the Net.

"Membership in the CommerceNet family provides us the opportunity to further develop some of our next-generation information discovery tools, particularly related to the needs of electronic commerce," noted PLS president, Matt Koll.

"The development of innovative search and retrieval technologies is critical to the success of electronic commerce. PLS's participation in CommerceNet will help to bring additional expertise in the vital area of intelligent access to information over the Internet," noted Randy Whiting, CommerceNet Steering Committee Chair and the manager of Hewlett-Packard's Electronic Sales Promotion.

CommerceNet is a consortium of companies and organizations whose charter is to facilitate the development and use of an open Internet-based marketplace for electronic commerce applications. Consortium members include leading companies in the electronics, computer, financial service and information service industries, and other companies and organizations committed to electronic commerce.

Information on how to participate in CommerceNet can be obtained by calling (415) 617-8790, or by sending e-mail to info@commerce.net. CommerceNet's URL is http://www.commerce.net.

Personal Library Software is the leading supplier of intelligent text-retrieval software for online, CD-ROM and Internet publishing applications. The PLS search engine is at the core of products and services from leading information companies including America Online, Apple Computer, DataTimes, Dow Jones, Financial Times Information Services, Grolier, Dialog/Knight-Ridder Information (www.dialog.com), Hewlett Packard (www.hp.com), NewsNet, Prodigy, Time Inc. (www.timeinc.com), Appleton & Lange, Congressional Quarterly, U.S. House of Representatives (www.house.gov), and the U.S. Department of Energy (http://www.ohre.doe.gov).

PLS can be reached at its headquarters at 2400 Research Blvd., Rockville, MD 20850, (301) 990-1155, its European office at Heidepad 2, 6584 CX Molenhoek, The Netherlands 31-805-86-300, and its Santa Clara, CA, office at 5201 Great America Pkwy, Suite 320, Santa Clara, CA 95054-1140, (408) 982-2590. Access to PLS Inc. via the Internet is available via http://www.pls.com or info@pls.com.

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FOR IMMEDIATE RELEASE

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FOR IMMEDIATE RELEASE

Personal Library Software Combines with The Electronic Newsstand to Bring Publishers onto the World Wide Web

(Rockville, MD, June 14, 1995) -- Personal Library Software Inc. (PLS) and The Electronic Newsstand® today announced an agreement to offer publishers a full-service solution for entering the Digital Age, and their potential subscribers a powerful searching tool on the World Wide Web.

The licensing and joint-service agreement calls for The Electronic Newsstand to incorporate PLWeb™, the industry-leading search engine from PLS, into the heart of its services offered to publishers. The agreement expands a cooperative relationship that began with The Electronic Newsstand licensing PLWeb for its well-known central publishing server (www.enews.com).

Now publishers participating in The Electronic Newsstand also can choose to employ the search power of PLS in building an individualized presence on the Web that includes dynamic access to their own content.

Founded in July 1993, The Electronic Newsstand provides the Internet community with free, easy access to a wide range of information furnished by many of the world's leading publishers. Premier periodicals including Business Week, The Economist, and Discover are just a few of the hundreds of interesting publications covering computers, business, foreign affairs, sports, politics, and many other areas. The Newsstand is designed to provide sample articles from current issues and solicit subscriptions for the print publications. The Newsstand also includes informative advertising forums from leading companies such as Fidelity Investments and Visa International.

Users of The Electronic Newsstand can browse the publishers' samplings for free, just like a conventional magazine rack. Using the Global Search option on the Newsstand's home page, browsing Internauts also can search across all publishers' archives employing PLWeb's advanced search engine for key words or concepts, and retrieve the results interactively. For example, a search under the concept of "travel" yields relevant articles from Travel Holiday and InsideFlyer magazines, among others.

Leveraging its expertise in developing a Web-based commercial presence, The Newsstand has developed partnerships to provide complete solutions for traditional publishers expanding into this new medium. In choosing PLS as a key partner, Jeffrey Dearth, chief executive officer of The Electronic Newsstand, said, "PLS has a wealth of electronic publishing experience, and the PLWeb product is so powerful that it provides many of the essential building blocks for an online system right out of the box."

For PLS, working with The Newsstand evokes a similar vision of providing commercial publishers the key products and services they need in this revolutionary electronic medium.

"The Electronic Newsstand is a perfect complement to PLS," said Matthew Koll, president of PLS. "The prime customers they serve are publishers, and publishers need a modern search engine such as ours for an effective electronic presence."

PLWeb 2.0 is a breakthrough in both price and performance, offering the richest set of features for electronic publishers -- including a distributed database architecture, natural-language querying, user authentication and billing features. It was released on May 15, and is available by download from the PLS Web site (www.pls.com) for a free 45 day trial evaluation. Priced at $4,995 per server, it also leads the market in affordability.

The Electronic Newsstand, launched with eight magazines, now features more than 300 titles. Publishing clients include McGraw-Hill, Times Mirror and Time, Inc. The Newsstand has sold magazine subscriptions in every state of the Union and in more than 60 countries. Accesses to The Newsstand exceed 6 million per month.

Personal Library Software is the leading supplier of intelligent text-retrieval software for online, CD-ROM and Internet publishing applications. The PLS search engine is at the core of products and services from leading information companies including America Online, Apple Computer, DataTimes, Dow Jones, Financial Times Information Services, Grolier, Dialog/Knight-Ridder Information (www.dialog.com), Hewlett Packard (www.hp.com), NewsNet, Prodigy, Time Inc. (www.timeinc.com), Appleton & Lange, Congressional Quarterly, the U.S. House of Representatives (www.house.gov), and the U.S. Department of Energy (www.ohre.doe.gov).

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FOR IMMEDIATE RELEASE

Personal Library Software Welcomes Release of Dow Jones News/Retrieval Text Library

(Rockville, MD, June 12, 1995) — Personal Library Software today announced that Dow Jones News/Retrieval® is the latest major online publisher to release a new service using the PLS search engine.

The release of the enhanced Text Library today by Dow Jones includes many new features and performance improvements made possible in part by PLS, including real-time, continuously updated newswires, flexible groupings of large databases for searching with more complex queries, and superior capacity and response time. PLS worked with Dow Jones to integrate its CPL search engine into the new service.

"We are proud that Dow Jones, one of the the premier online publishers, chose PLS," said Matthew Koll, PLS president. "The service Dow Jones is releasing today takes advantage of the custom interface to our CPL library to deliver many new searching and output options to its users. It is a fine example of how our engine is suited for industrial-strength applications that require high volumes of data and usage, combined with concurrent updates."

CPL, (which stands for Callable Personal Librarian), is a programming tool kit that allows developers such as Dow Jones to build their own, customized product using the PLS search engine.

"We wanted a way to give our customers the powerful new features and performance they need," said Timothy Andrews, director of product development at Dow Jones

Business Information Services. "We needed a search engine that was robust and scalable enough to handle the sheer volume of information in our many databases. PLS enabled us to build such a product."

Dow Jones Business Information Services, an arm of Dow Jones & Company, Inc., provides business news and information products to corporations, consumers and private investors through a variety of electronic media: computer, telephone, facsimile and radio.

Personal Library Software is the leading supplier of intelligent text-retrieval software for online, CD-ROM and Internet publishing applications. The PLS search engine is at the core of products and services from leading information companies. PLS customers include Apple Computer, Grolier, Hewlett Packard (www.hp.com), Time Inc. (www.timeinc.com), Appleton & Lange, Congressional Quarterly, the U.S. House of Representatives (www.house.gov), and the U.S. Department of Energy (www.ohre.doe.gov).

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FOR RELEASE MAY 15, 1995

Personal Library Software Breaks Cost Barrier for Electronic Publishing

With New Release of PLWeb Search Engine Shipped via Internet

(WASHINGTON, May 15) - Personal Library Software Inc., which provides the leading-edge search engine that powers major online information systems, today began distributing the engine directly via the Internet, driving the cost of such high-end technology to new lows.

"We will make it easy for anyone to be an electronic publisher, and to do it with the most advanced, commercial-quality software available" said PLS President Matthew Koll. "Now any organization, large or small, can afford to publish volumes of information on the World Wide Web. Just as important, users will be able to find it."

The new, enhanced release of the PLS search system, known as PLWeb™, can be ordered and shipped electronically to customers who want to establish their own World Wide Web presence. Using a WWW browser such as Mosaic, they can obtain the PLS software directly over the Internet for a free 45-day trial by connecting to www.pls.com and following the simple directions.

The price of PLWeb is only $4,995, less than 40 percent of what such sophisticated search-server software cost just six months ago. Employing the Internet itself as a low-

cost distribution channel allows PLS to set an aggressive new standard for price-performance, according to Koll.

Independent industry analysts reacted favorably to the PLS strategy for distribution and pricing.

"The target audience for these products are the people who are on the Web. It's the perfect way to reach them," commented Paul J. Dravis of J.P. Morgan Securities Inc., who recently published a report on the growing Web publishing industry. "It's good that PLS is dropping the price down, because that will encourage people to experiment. The way you're going to get the volumes going, especially in this kind of a market, is to get the price down."

PLWeb includes the same capabilities for "natural language" text retrieval and intuitive concept searching that is licensed from PLS by major information companies such as DataTimes, Knight-Ridder Information and Time Inc.

The new release of PLWeb also incorporates validation of database subscribers when they log on, as well as a log to track detailed usage, giving publishers a complete commercial solution. Users can be charged on a subscription basis, or by the value of specific information they retrieve. The PLS engine can be used with the most popular WWW server software, including those from CERN, NCSA, Netscape Communications Corporation and Open Market Inc.

PLWeb's new release can be used to search across multiple databases anywhere on the Internet, opening a whole new dimension in cyberspace that can link users to many electronically published sources at once. This capability, called the Distributed Database Model, offers powerful synergy to both existing and new electronic publishers who adopt the PLS technology.

Koll cited three major advantages of the Distributed Database Model:

- Publisher control of "look-and-feel," pricing, and editorial policies.
- Seamless full-text searching across local and remote PLWeb servers.
- Database groups that provide unique, personalized views of information.

PLWeb's tools can even index documents on a remote WWW site that is not running a copy of the PLS software, Koll said. PLWeb supports the Web's HTML format as well as Adobe Acrobat documents.

Some well-known publishers already using of PLS software for their Web sites include Time Inc., which uses the search engine for its Pathfinder service (www.pathfinder.com), the U.S. House of Representatives (www.house.gov) and Knight-Ridder Information (www.dialog.com).

In addition to publishers' databases, other customer applications of PLWeb include internal or external distribution of documents, fully searchable, by organizations that need such capability for their own, self-defined missions. The Hewlett-Packard Company of Palo Alto, Calif., uses the PLS engine for Access HP (www.hp.com), an electronic marketing system that reaches its employees, customers, distributors and solutions-providers worldwide.

Along with DataTimes, Knight Ridder and Time Inc., other information companies who use the PLS search engine include America Online, Prodigy, NewsNet, Telebase, Congressional Quarterly, Grolier and Financial Times Information Services.

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FOR IMMEDIATE RELEASE

Personal Library Software, Open Market Join to Offer
Intelligent Searching on Commercial Internet Servers

(WASHINGTON, May 11) -- Two leading-edge software firms today joined forces to offer advanced, intelligent database searching on the Internet in a secure setting required for large-scale commercial publishing and data distribution.

Personal Library Software Inc., the leading provider of full-text search technology to the electronic publishing industry, and Open Market Inc., which delivers high-end electronic commerce products for the Internet's World Wide Web, announced the agreement. The new partnership ensures compatibility between the PLWeb™ search engine from PLS and the Open Market WebServer™.

"Open Market offers a rich environment for commerce on the web," said Matthew Koll, CEO of PLS in Rockville, MD. "That environment, enhanced by our information delivery capability, gives electronic publishers the total solution they have been looking for."

Shikhar Ghosh, CEO of Open Market in Cambridge, MA, underscored the impact of the new relationship.

"We recognize that PLS, with its established market share in the online industry and pioneering presence in Web-based publishing, is an ideal partner for us," Ghosh said. "The automatic intelligence in their search engine is an excellent fit for the large-scale commercial applications we envision for our product."

"The automatic intelligence in their search engine is an excellent fit for the large-scale commercial applications we envision for our product."

Koll noted that the intelligent concept searching and natural-language retrieval embodied in PLS are fully automatic, requiring no extra effort on the part of publishers or users. "If it's not automatic, it's not scalable," Koll said. "Keeping up with rapid updates to multigigabyte databases at the same time as thousands of people are searching -- *that's* our most distinguishing feature."

High-end applications developed by commercial publishers, or other organizations who need to disseminate large collections of documents, often require storing gigabytes of free-form text and graphics. With that much information, users need an intelligent tool to help them find what they are looking for without being overwhelmed by irrelevant data.

Both Koll and Ghosh emphasized the advantages of their products for such large-scale applications.

Ghosh noted that Open Market WebServer and Secure WebServer™ -- the version that allows encrypted and authenticated data transmission -- can support more than 1,000 simultaneous connections, several times more than other servers can handle today. PLWeb already is compatible with WebServer, and support of Secure WebServer is planned, Koll said.

One site that already uses both the PLS search engine and Open Market's server system is Time Inc.'s highly acclaimed Pathfinder service (www.pathfinder.com). Time is using Open Market's products for registration and future commercial activities on Pathfinder.

In addition to Time, two more of the the world's leading media companies -- Tribune Company, Advance Publications Inc. -- recently announced their selection of Open Market to provide software and services to support their ability to distribute content and conduct business on the Internet. Tribune Company, which publishes six daily newspapers and owns and operates eight television and six radio stations, along with Advance Publications, which owns Conde Nast and Random House, also announced investments in Open Market.

Open Market was founded in 1994 by Ghosh and David Gifford, chief scientific officer and head of MIT's Programming Research Group. Open Market develops and markets software, services and customer solutions to facilitate commerce on the Internet and the World Wide Web.

Personal Library Software is the the leading supplier of intelligent text-retrieval software for online, CD-ROM and Internet publishing applications. The PLS search engine is at the core of products and services from leading information companies, including DataTimes, Dow Jones, NewsNet, America Online, Prodigy, Apple Computer, Grolier, Congressional Quarterly, Financial Times Information Service and Appleton & Lange.

PLS began shipping the engine configured for the Web almost a year ago. In addition to Time's Pathfinder, Web sites already using the PLS engine include the public information servers sponsored by the U.S. House of Representatives (www.house.gov) and the Department of Energy (www.ohre.doe.gov), Hewlett Packard's Access HP (www.hp.com), the Arizona Star's Starnet (www.azstarnet.com), and Knight-Ridder Information (www.dialog.com). Knight-Ridder is a minority investor in PLS.

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Open Market can be reached at its headquarters at 245 First Street, Cambridge, MA 02142, (617) 621-9500 Access to Open market is available via http://www.openmarket.com or info@openmarket.com
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FOR IMMEDIATE RELEASE

Bertelsmann, AG Licenses Personal Library Software Engine for Electronic Publishing

(Rockville, MD, May 3, 1995) -- Personal Library Software Inc., (PLS), today announced that its intelligent text-search software has been adopted by eps Bertelsmann GmBH in Guetersloh, Germany for its electronic publishing. Bertelsmann will be using the PLS engine to develop CD-ROM's with advanced full-text searching in German and other major European languages.

Bertelsmann is Europe's largest media company, and a worldwide leader in book and media publishing. The electronic publishing division, eps Bertelsmann, develops CD-ROM based multimedia titles for member companies of the Bertelsmann organization and is also one of Germany's leading developers for a wide range of commercial publishers. "The choice of PLS for our electronic publishing needs was based not only on their renowned intelligent search features, but also the multi-language capabilities of the software," stated Manfred Stiens, head of the eps Bertelsmann development department. "One of Bertelsmann's goals is to expand further into many forms of electronic publishing, and this is supported by PLS's overall vision for integrating CD-ROM, the Internet, and the World Wide Web."

PLS opened an office in the Netherlands last year to focus on developing partnerships and expanding its reach in the European electronic publishing community. With full support for all the major European languages, the suite of software products offer multilingual querying, dynamic concept searching, relevance ranking, and a distributed database architecture. "We are happy to have this opportunity to form this strategic relationship with Bertelsmann as our partner in the German electronic publishing marketplace," stated Richard Black, PLS's vice president of business development.

Personal Library Software

Bertelsmann is a privately held multinational group of companies spread across more than 40 countries. Among its best known American enterprises are RCA Records, Arista Records, the Bantam Doubleday Dell Publishing Group, and the magazines Family Circle and McCall's. Over the past few months Bertelsmann has moved aggressively into broader areas of electronic publishing in both Europe and North America.

Personal Library Software is the leading supplier of intelligent text-retrieval for online, CD-ROM and Internet publishing applications. CPL is the industrial strength, scalable search engine at the core of all PLS products. A list of leading publishers and information companies using PLS technology includes America Online, Apple Computer, DataTimes, Dow Jones, Financial Times Information Services, Grolier, Hewlett-Packard (www.hp.com), Dialog/Knight-Ridder Information, NewsNet, Prodigy, Time Inc. (www.timeinc.com), Appleton & Lange, Congressional Quarterly, and the U.S. House of Representatives (www.house.gov).

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FOR RELEASE MAY 1, 1995

Personal Library Software and Individual Inc., Combine to Offer Intelligent Searching of Custom Information Archives on the World Wide Web

(Rockville, MD, May 1, 1995) -- Personal Library Software Inc., (PLS), and Individual Inc., announced today a technology partnership and co-marketing agreement to combine the best of search agents, intelligent information retrieval and highly relevant content. The partnership will result in PLS's leading Web search engine, PLWeb, being tightly integrated into Individual's *First! for the Web* customized news service for internal corporate Web servers. This marriage represents one of the first major applications that links leading content with dynamic search agents and filtering technology for Web-based applications.

First! for the Web is a business information service that intelligently scans and filters hundreds of information sources based on a user-designed profile. Using Individual's SMART agent technology, profiles are matched against a large collection of data, with the relevant documents appearing as HTML pages automatically organized by topic. The vast information resources are a result of Individual establishing relationships with many of the world's leading information providers covering regional, national, and international wires, newspapers, and periodicals, with targeted vertical sources specific to high-technology, healthcare, energy and many other markets.

PLWeb, already the industry leading Web based search engine, will be bundled with the *First!* service for those customers who want to perform additional searching on the incoming collection of stories and maintain a searchable archive. PLWeb complements *First!*, with more than just natural language searching and relevance ranking, by offering dynamic knowledge discovery tools, known as Concept and Relate advisors. These searches glean more value from the information by suggesting related words and terms that the user may not have known existed in the document; what is uncovered in these concept searches becomes the next generation of profiles as dynamic new areas of interest emerge.

With the increasing proliferation of information, staying abreast is increasingly difficult. PLS and Individual Inc. have taken a significant step towards making this a much easier proposition. "The value of this relationship to business is that we are combining technology to manage the very real problems of information overload and turning data into information," noted PLS president, Matt Koll. "PLWeb adds real value to *First! for the Web* customers by providing more and powerful ways to get at relevant information," said Individual chairman and CEO Yosi Amram.

The combined service is available now. A future version of *First! for the Web* offering even tighter links to PLWeb is currently under development and scheduled for release later this spring. For more information and pricing contact either Paul Pinella at Individual Inc., (617) 273-6000 ext.409 or Paul A. Campbell at PLS, 301-990-1155..

Individual Inc., offers business professionals the smartest, easiest and most cost-effective way of gaining current awareness in a rapidly changing world. As an Open SMART Information Exchange (sm), Individual provides electronic information services which intelligently interconnect content providers and subscribers. Its interactive, customized services include *First!* for corporate workgroups and enterprises, *HeadsUp* and *iNews* for single subscribers, and *Newspage* on the World Wide Web (http://www.newspage.com). Individual has established alliances with many prominent industry leaders including Dialog/Knight-Ridder Information, Lotus, Motorola, Apple, Prodigy, and AT&T.
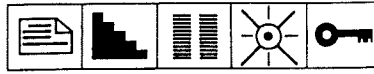
Formed in 1989, Individual Inc. is headquartered in Burlington, MA with offices in Burlingame, CA, New York City and the U.K. For more information about Individual and its full range of news services, send a message to info@individual.com.

Personal Library Software is the leading supplier of intelligent text-retrieval software for online, CD-ROM and Internet publishing applications. The PLS search engine is at the core of products and services from leading information companies, including America Online, Apple Computer, DataTimes, Dow Jones, Hewlett Packard (www.hp.com), Financial Times Information Services, Grolier, Dialog/Knight-Ridder Information, NewsNet, Prodigy, Time Inc.(www.timeinc.com), Appleton & Lange, Congressional Quarterly, the U.S. House of Representatives (www.house.gov), and the U.S. Department of Energy.

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FOR RELEASE ON MARCH 27, 1995

PLS Unveils the Next Generation of Online Search Agents; Positions New @1 Service and PLWeb Server as Master Global Index for Navigating the Internet

Innovative Server at Breakthrough Low Price, Open Architecture System to Attract Publishers, Metaserver to Let Online Subscribers Find Information Anywhere

(Rockville, MD, March 27, 1995) - Personal Library Software Inc. (PLS) announced today technological and pricing breakthroughs in the race to develop the world's most intelligent agents for searching the Internet, the World Wide Web and commercial databases around the world.

* The new *@1*™ service -- to be launched later this year -- is a master global index, a superdirectory that will allow users to make natural language requests and locate information they seek without needing to first identify the databases in which the information resides.

* The **METASERVER** -- at the heart of @1 -- is a significant advance on current web-crawler indexers, enabling each Web site connected to the @1 network to maintain its independence.

* *PLWeb*™, the search server/dispatcher/gatherer for distributed electronic publishing, was announced in December 1994. It will be available in mid-May by download from PLS's Internet home page -- http://www.pls.com -- or by mail order, for an unprecedented low price of **$4,995**.

These three elements combine to provide a missing link for information publishers and consumers. Any publisher can establish an independent presence on the Web, maintaining its own pricing and editorial policies, with its own look-and-feel, while interconnecting with one or many information alliances.

Information providers can now offer consumers one-stop shopping by reaching through to many distributed sources. The @1 technology and service offers the potential of substantial "walk-in" traffic from the information highway. Online services that already aggregate large amounts of information will be able to expand their offerings even further. And corporations that publish information internally will be able to unite internal and external information sources, making the "extended enterprise" a reality.

PLWeb

PLWeb is the latest upgrade to the PLServer™ product line. The currently shipping PLServer v1.2 is an information retrieval system that provides fast and powerful natural language access to full-text and multimedia objects residing on a World Wide Web or other HTTP server. PLServer can be accessed via most of the popular Web browsers, such as Mosaic and Netscape Navigator. The name change to "PLWeb" reflects the added capabilities of this new version, particularly the ability to support distributed searching. What a PLWeb user perceives as a database could actually be just the tip of an iceberg; any database can be linked with other databases residing on other servers to form a *virtual* database. So, each PLWeb can be a *server*, finding information in the databases it manages and offering up its results to the person or other PLWeb sites asking the questions, a *dispatcher*, passing queries along to other servers, and a *gatherer*, merging the results from multiple servers into one consistent relevance-ranked set.

Other significant new features of PLWeb include login and password control, compatibility with secure communications, per-document pricing options, billing/tracking logs, better support of HTML, and easier installation, database administration and customization.

Breakthrough Pricing and Distribution

Even though PLWeb is the most powerful and proven information server in the market --
based on the same PLS engine used by some of the biggest online services and supporting
features like concurrent update, automatic concept searching, field-based and numeric
range searching, and scalability into the hundreds of gigabytes and beyond -- PLS is setting
the price for PLWeb at an incredibly low $4,995. Starting May 15th, PLWeb will be
available via FTP download from *http://www.pls.com* as well as by mail order. PLWeb
comes with a free thirty-day trial period.

PLWeb will be available in May for Sun and Hewlett-Packard computers, with versions for
Windows NT, RS6000, NCR, Digital, Silicon Graphics, Tandem and other computers to
follow over the next few months. Later this year, PLWeb will be extended to run on
Windows PCs and Macintoshes, allowing integrated desktop searching of local CD-ROMs
combined with remote databases accessed over any TCP/IP network. Another feature
coming this year is a profiling or "agent" capability, allowing users to maintain standing
requests and have new relevant information routed to them as it arrives. Yet another
addition will be the integration of a Web crawler tailored to PLWeb -- allowing an
administrator to more easily traverse multiple web sites in order to include remote files in a
PLWeb database. Customers who license PLWeb before June 30 will receive the agent and
crawler upgrades at a substantial discount when they become available.

@1 and the Metaserver

One of the incremental benefits that PLWeb offers to publishers is the ability to participate
in the @1 service, which will be launched later this year. All PLWeb customers will be
eligible for charter membership in @1. The way @1 works is that each participating PLWeb
site will house "beacon" software which will automatically inform the @1 metaserver on an
ongoing basis about the information content indexed by that PLWeb site. The *beacon*
software and *metaserver* are built upon PLS's intelligent engine, thus they can
automatically recognize the important concepts in each database and guide users to the
most fruitful places to search

according to the user's interest. @1 will offer consumers this super-directory service, and provide publishers walk-in traffic to their site.

The *metaserver* is different from a web-crawler index in that the text doesn't have to be pulled across the network, and that each Web site maintains its independence. Crawlers will play a complementary role in @1, as will services that provide human-generated analysis and opinion on Web sites.

"It's going to take a combination of approaches and multiple alliances to ensure that users can find what they are looking for in the new Web," noted PLS President Matthew Koll. "@1 is for everyone. We see it coming in different flavors as multiple online partners impart their own slants - in terms of database coverage, editorial judgment and commentary, and user interface. We envision some users coming directly to us. But we also see this as an opportunity to continue the behind-the-scenes support we have been providing to publishers so effectively over the years. Our goal now is to offer not just enabling technology, but technology that can bring in new business to publishers."

@1 will be an open system. PLS plans to make the @1 APIs (Application Programmer's Interfaces) public, so that all publishers and vendors can participate. More details on @1 plans, including membership terms will be forthcoming over the next few months.

About PLS

Personal Library Software is the leading supplier of text retrieval and document management software combining intelligent retrieval techniques with the flexibility of graphical user interfaces. The PLS search engine is at the core of products or services from leaders in electronic publishing, including Time Warner (www.pathfinder.com), Hewlett-Packard (www.hp.com), the U.S. House of Representatives (www.house.gov), Dialog/Knight-Ridder Information (www.dialog.com), the Associated Press, DataTimes, Dow Jones, America Online, Prodigy, NewsNet, Telebase, Congressional Quarterly, Grolier, Financial Times Information Services, Appleton and Lange, and other important online and CD-ROM publishers. The PLS family of products, first deployed in 1983, is used today by several thousand organizations and several million individuals in CD-ROM and multimedia publishing and online services, as well as in workgroup and enterprise applications. Personal Library Software has emerged as the leader in information retrieval, growing from "one of the best kept secrets in full-text database management" into the "de facto standard".

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All other trademarks are the property of their respective holders.

PERSONAL LIBRARY SOFTWARE

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FOR IMMEDIATE RELEASE

Hewlett-Packard Company Unveils Marketing System on the World Wide Web
Access HP Uses PLS Software to Find Key HP Information

(Rockville, MD, February 14, 1995) -- Personal Library Software Inc., (PLS), announced today that its intelligent text-search software has been adopted by the Hewlett-Packard Company of Palo Alto, California, for *Access HP*, its worldwide electronic marketing system. *Access HP* can be reached via the Internet's World Wide Web effective immediately at http://www.hp.com.

With more than 600 sales and support offices, and distributorships in 110 countries, HP designed Access HP to offer its employees, customers, distributors and solutions providers worldwide access to rapidly changing information -- news, company information, product data, services and support information, and directories of corporate and partner contacts. An original sponsoring member of CommerceNet, HP is a leader in electronic marketing, exploring how communications and information technologies apply to the creation of a compelling electronic marketplace.

The key factor behind HP's choice of PLServer, PLS's Web publishing product, was the information discovery capabilities that this software provides. To facilitate broad public use of Access HP, HP decided to incorporate powerful text search software that would easily help users find the relevant information within a large electronic library. PLServer frees users from worrying about issues such as, how to formulate a query or which are the "right" terms to use for a search.

"We have a very broad product line, and our customers may not be aware of all we have to offer or how to find all of the information regarding a particular product", stated Randall Whiting, manager of HP's Electronic Sales Promotion and a CommerceNet sponsor steering committee chair. "In Access HP we don't want to limit our users to Boolean searches where they might miss other products that meet their needs. Also PLS's Concept Search is a critical electronic marketing tool that aids in the discovery process by automatically providing related words.

As an integral part of Access HP, users can access the search capability literally anywhere in the system by simply clicking on the binocular icon."

"We are pleased to work with Hewlett-Packard on this state-of-the-art electronic marketing system", said Dr. Matthew B. Koll, PLS's president. "Whether Access HP users need to learn about HP directions in test and measurement, locate information on the latest Laserjet drivers, or review recent press releases, it can all be found using plain English with PLServer. This valuable application, by a leading-edge, global company further proves that with the right tools, the Internet and the World Wide Web can be an effective medium for business."

Personal Library Software is the leading supplier of smart text retrieval and document management software combining intelligent retrieval techniques for online, CD-ROM and Internet publishing applications. The PLS search engine is at the core of products and services from leading information companies, including America Online, Apple Computer, Inc., DataTimes, Dow Jones, Financial Times Information Services, Grolier, Dialog/Knight-Ridder Information, NewsNet, Prodigy, Time Inc.(www.timeinc.com), Appleton & Lange, Congressional Quarterly, and the U.S. House of Representatives (www.house.gov).

PLS can be reached at its headquarters at 2400 Research Blvd., Rockville, MD 20850, (301) 990-1155, its European office at Heidepad 2, 6584 CX Molenhoek, The Netherlands 31-805-86-300, and its Santa Clara, CA, office at 5201 Great America Pkwy, Suite 320, Santa Clara, CA 95054-1140, (408) 982-2590. Access to PLS Inc. via the Internet is available via http://www.pls.com or info@pls.com.

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AP PRESERVER ADDS TEXT CAPABILITY, INTERNET SUPPORT FROM PLS

San Francisco (AP) -- The AP Preserver digital archive system will soon offer dramatic enhancements, including text capability and Internet support, due to a collaborative effort between The Associated Press and Personal Library Software, Inc. (PLS), the two companies announced today at the Digital '95 convention and trade exhibition.

PLS advanced software will be integrated into the AP Preserver to add text and storage retrieval capabilities, increased image search speed and support for access to Preserver systems on the Internet.

PLS is the leading supplier of intelligent search technology that provides powerful access to information. Their products are known for their natural language query, concept searching and relevance ranking capabilities.

"Combining AP and PLS expertise results in a big boost to Preserver's performance," said Jim Gerberich, AP's director of product management. "With its powerful new tools, it will be even more productive for researchers and librarians, and easier to use."

PLS' powerful tools will improve and expand Preserver's text and image search capabilities. With the addition of natural language query and concept searching, anyone can access pictures and information quickly.

"I hope this is the last of the 'picture is worth a thousand words' analogy, but I can't help pointing out that AP and PLS together have turned that expression on its head -- because now just a few simple words can yield the perfect picture," said Dr. Matthew Koll, president and founder of PLS.

The PLS enhancements will also be incorporated into AP's internal image archive system, which is expected to be on-line before year end.

"The PLS search engine is at the heart of many leading information products," said Fady Khairallah, AP's director of research and development. "Its powerful retrieval software will help take AP's archiving systems to the next level."

A prototype of the combined AP/PLS software product, along with newly upgraded Preserver software for existing picture archive systems, is being demonstrated at the AP Booth #102.

AP Preserver is based on IBM's RISC System 6000 hardware platform and UNIX operating system. Its open architecture permits easy access via TPC/IP using standard Ethernet, Internet modem or ISDN network connections. AP Preserver can also reside on a AP Leaf Picture Desk network.

Preserver accepts any file type, including TIFF, PICT, EPS and PostScript formats, as well as native applications such as QuarkXPress, PageMaker, Illustrator and FreeHand.

More than one million images are currently stored on production Preserver systems at nearly 30 news organizations worldwide.

The PLS search engine is at the core of products and services from America Online, Apple Computer, Inc., DataTimes, Dow Jones, Financial Times Information Services, Grolier, Dialog/Knight-Ridder Information, NewsNet, Prodigy, Time Inc. (www.timeinc.com), Appleton & Lange, Congressional Quarterly and the U.S. House of Representatives (www.house.gov).

A member cooperative founded in 1848, The Associated Press is the world's oldest and largest newsgathering organization. Headquartered in New York, the AP provides news, photos and graphics to more than 15,000 newspapers and broadcast outlets worldwide.

PLS can be reached at its headquarters at 2400 Research Blvd., Rockville, MD 20850, 301-990-1155, its European office at Heidepad 2, 6584 CX Molenhoek, The Netherlands 31-805-86-300, and in Santa Clara, CA at 5201 Great America Parkway, Suite 320, Santa Clara, CA 95054, 408-982-2590. Access to PLS Inc. via the Internet is available at http: / / www.pls.com or info@pls.com

Personal Library Software

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FOR IMMEDIATE RELEASE

Personal Library Software and America Online
Sign Joint Development and Marketing Agreement

(Rockville, MD - January 5, 1994) - Personal Library Software (PLS) and America Online, Inc. today announced an agreement to remarket PLS's text-retrieval software as part of America Online's technology licensing program. PLS provides the core search technology for America Online's popular consumer online services.

The PLS search engine is best known for its relevance ranking, natural language queries, and concept searching capabilities, as well as its ability to effectively manage large databases with a heavy transaction load.

In a related event, Apple this week unveiled eWorld™, a new Apple online service based on the America Online technology, which features the core search technology of PLS.

"Apple," which also uses the PLS engine as the core of its AppleSearch™ workgroup product, "was one of the first major companies to appreciate PLS's value - namely, linking power with ease of use." Matt Koll, PLS's President and CEO said. "Apple and America Online are two of the world's most visionary organizations. Over the next few years we hope to work closely with both firms in our effort to deliver relevant information to anyone, any time, anywhere."

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"PLS enables us to offer America Online members easy access to the most relevant information, fitting in perfectly with the graphical, intuitive look and feel of our services," said Steve Case, President and CEO of America Online. "Through this new marketing agreement, companies that license our technology will enjoy the same powerful, core search technology."

Personal Library Software is the leading supplier of text retrieval and document management software combining intelligent retrieval techniques with the flexibility of graphical user interfaces. The PLS family of products is used today in online services, CD-ROM and multi-media publishing, as well as in workgroup and enterprise applications. Personal Library Software has emerged this past year as the leader in information retrieval, growing from "one of the best kept secrets in full-text database management," as described by one journalist, into the emerging "de facto standard in natural language/relevance retrieval," as written in the October 1993 issue of Searcher magazine.

America Online, Inc. (NASDAQ: AMER) is the nation's fastest growing provider of online services to consumers in the United States. The Company offers its more than 500,000 subscribers a wide variety of services including electronic mail, conferencing, news, sports, weather, stock quotes, software, computing support and online classes. Founded in 1985, the Company has established strategic alliances with dozens of companies including Time-Warner, The New York Times, CNN, Knight-Ridder, Tribune Company, IBM and Apple.

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FOR IMMEDIATE RELEASE

PLS Helps "Open House" to Public

Search Federal Databases via the Internet -
Direct from the House of Representatives

(Rockville, MD 94, January 4, 1995) - Personal Library Software, Inc. (PLS) announced today that its intelligent text-search software is being used for the U. S. House of Representatives' new information service on the World Wide Web. The House Web site can be accessed via the Internet (at *http://www.house.gov)* starting immediately. As announced today by incoming Speaker of the House, Newt Gingrich, the House is providing public access to its Internet servers, as part of his effort to usher in a new era of public accessibility to congressional information.

By connecting to www.house.gov, users will be able to search the full texts of the U. S. Code and the Code of Federal Regulations as well as follow links to a world wide collection of legal works. This virtual law library of over 1200 volumes will be free for anyone with Internet access and a Mosaic-like browser.

To provide intelligent yet simple access to the U.S. Code and the Code of Federal Regulations, the House is using PLS's World Wide Web publishing product, PLServer. To encourage broad public access it was important for the House to incorporate powerful text search software that would help users more easily find relevant information in this vast store of legal facts and knowledge. PLServer meets that need by letting people search using plain English instead of requiring complex query formulation.

In addition, PLServer lets people find relevant information even when they don't know the "right" words to search with. Consider someone looking for sections of the U. S. Code dealing with gambling, for example. Many of the relevant sections of the U. S. Code mention "gaming" or "wagering", but do not contain the word "gambling". Users of traditional online systems

would fail to see those important sections. But using PLServer, simply by entering the word "gambling" and clicking the *concept search* button, users will find those relevant sections that are about gambling, even though the word 'gambling" does not appear there.
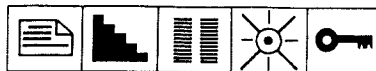
Putting the U. S. Code and Code of Federal Regulations on the Internet represents a major advance in the ability of the public to learn and know about the laws and regulations of the Federal government. The U. S. Code, which is also searchable by PLS software on a CD-ROM sold through the Government Printing Office, is a complete repository of all current Federal laws. Similarly, the Code of Federal Regulations contains all of the regulations created and enforced by Federal agencies.

"The U. S. Code on CD-ROM has been a great success, reaching thousands of people", said Mr. Edward F. Willett, Jr., Law Revision Counsel of the House of Representatives, the publisher of the Code. "Now, by using the Internet, the House is taking a giant step -- instantly granting easy access to millions of people."

Personal Library Software is the leading supplier of text retrieval and document management software combining intelligent retrieval techniques with the flexibility of graphical user interfaces. The PLS search engine is at the core of products or services from leading information companies, including DataTimes, Dialog/Knight-Ridder Information, Dow Jones, America Online, Apple, Prodigy, Time Inc., NewsNet, Telebase, Congressional Quarterly, Baseline, Grolier, Financial Times Information Services, Appleton and Lange, and other important online and CD-ROM publishers. The PLS family of products is used today by several thousand organizations and several million individuals in CD-ROM and multi-media publishing and online services, as well as in workgroup and enterprise applications. Personal Library Software has emerged as the leader in information retrieval, growing from "one of the best kept secrets in full-text database management" into the "de facto standard". PLS can be reached at its headquarters at 2400 Research Blvd., Rockville, MD 20850, (301)990-1155, or at info@pls.com.

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FOR IMMEDIATE RELEASE

Prodigy Selects Personal Library Software To Provide Advanced Search Functionality For Prodigy Service

(Las Vegas, Nov. 14, 1994) - Prodigy Services Company and Personal Library Software, Inc. (PLS) announced today that Prodigy will incorporate PLS's information retrieval technology into the PRODIGY service. Prodigy is a partnership of IBM and Sears.

With PLS's technology, PRODIGY members will be able to search for specific information using simple English commands. Prodigy executives said they expect the PLS technology to be folded into the service, starting with Prodigy's news section, over the next several months.

"Personal Library Software offers the sophisticated technology to do a quick, thorough search of Prodigy's large database, and can be effectively managed using very simple, plain English commands," said Jim Beall, Prodigy Senior Vice President, Systems. "PLS's combination of power and simplicity is important to Prodigy and its members."

Prodigy provides members with on-demand access to hundreds of features, including news, references materials, education, entertainment, travel, E-mail. brokerage, banking, shopping, bulletin boards and the Internet.

Personal Library Software is the leading supplier of content access software which combines intelligent retrieval techniques with the flexibility of graphical user interfaces. The PLS family of products is used today in online services, CD-ROM, Internet and multi-media publishing, as well as in workgroup and enterprise applications. PLS can be reached at its headquarters at 2400 Research Blvd., Rockville, MD 20850, (301) 990-1155, or via the Internet at info@pls.com.

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FOR IMMEDIATE RELEASE

Time Inc. Hits the Net with PLS

(Rockville, MD - November 9, 1994) - Personal Library Software, Inc. (PLS) announced today that its advanced text search capabilities are being used in Time Inc.'s World Wide Web test service, called Pathfinder, at *http://www.timeinc.com*.

Time Inc. recently unveiled this site as part of a pilot program to publish multimedia content on the Internet using PLS's WWW publishing product, PLServer^{TM}. At this site users will be able to find what they are looking for in *Time, Time Daily,* (a daily news summary from *Time* magazine) *Sunset* and *Vibe* magazines, *The Virtual Garden* and *Time Warner Electronic Publishing* using simple natural language queries, dynamic concept searching and automatic relevance ranking.

"PLS embodies the high level of information access we want for our users," Oliver Knowlton, Time Inc.'s Director of Operations, Multimedia, said. "As the number of publications available on this system grows, users want to be able to get information fast and simply."

"Our goal at PLS is to help people find what they want, or at least, what they need," said David C. Macdonald, PLS Director of Marketing for Electronic Publishing. "It's great to have Time participating in bringing great information to more people in novel ways."

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"Time Inc.'s Pathfinder features a highly-graphical mix of stories, pictures and browsable databases. Easy links, known as "hypertext," allow users to get to related stories and pictures. Applications include a Voter's Guide to find out how your representatives in Congress voted on key issues, a Gardener's tool to determine the best plants for anyone's specific backyard and Message Boards for conversations ranging from politics to movies.

Personal Library Software is the leading supplier of content access software which combines intelligent retrieval techniques with the flexibility of graphical user interfaces. The PLS family of products is used today in on-line services, CD-ROM, Internet and multi-media publishing, as well as in workgroup and enterprise applications. PLS can be reached at its headquarters at 2400 Research Blvd., Rockville, MD 20850, (301) 990-1155, or via the Internet at info@pls.com.

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PERSONAL LIBRARY SOFTWARE

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PLS 01

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PLS SHIPS PLSERVER™ FOR THE WORLD WIDE WEB

Dialog to Offer Intelligent Access to Customer Support Information

ROCKVILLE, MD -- July 5, 1994 -- Personal Library Software, Inc. (PLS), the leading developer of search systems for on-line services, today announced the shipment of its PLServer -- an Internet publishing and information access tool. PLServer will first be used by Dialog Information Services for the development of a World Wide Web (WWW) application for customer service and support. Dialog customers will have access to DIALOG® search aids, support materials, and product announcements via the Internet, along with the added ability to cross-reference these materials using PLS's advanced search tools. The Dialog WWW server is scheduled for release this fall.

"The power and functionality of PLServer surpasses any other search tool available on the Internet today," said Josh Groves, Dialog's manager of strategy and business development. "With PLServer, Dialog will soon deliver resources and search support in a way we've never been able to before. The end result is a new level of customer support that is in step with the future of corporate communications."
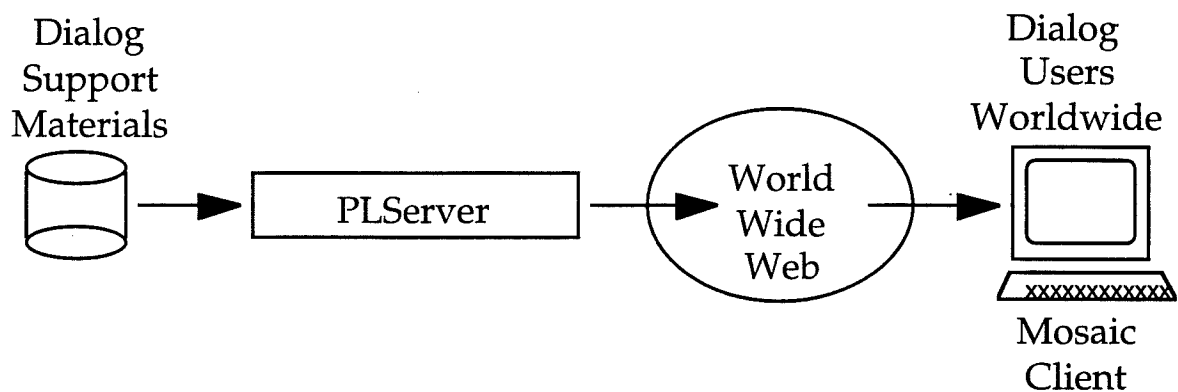
"Dialog's server is a perfect example of a PLServer application and it just scratches the surface of Internet publishing opportunities," stated Dave Van Daele, PLS's vice president of sales and marketing. "Combining Dialog's resources with software like ours constitutes a revolution in information access. Together, we are setting the pace by launching an Internet application that uses our search and retrieval tools to provide a real service to Dialog customers."

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PLServer on the Internet: How it works

PLServer links the Mosaic graphical user interface (GUI) to the PLS search engine. Mosaic, which is distributed free by NCSA (National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign), is a point-and-click "browser" that allows users to view text and graphics on the Internet. One of Mosaic's strengths is that it hides the complexity of the World Wide Web, making it easy for users to link to information services anywhere in the world.

Dialog
Support
Materials

PLServer

World
Wide
Web

Dialog
Users
Worldwide

xxxxxxxxxxx

Mosaic
Client

PLServer turns DIALOG® search aids, support materials, product announcements and other resources into a single, interactive information source. Dialog users will be able to retrieve relevant information from all of the available materials with a single request, rather than having to reference each source independently.

Dialog will add value to its customer service offerings by providing the tools to intelligently access the information via the Internet. There will be virtually no limit to the number of Dialog users who can access the server simultaneously, or the amount of information Dialog can publish due to PLServer scalability and robustness.

PLServer is currently available for WWW servers running Hewlett-Packard UX and SUN Solaris 2.3.

Personal Library Software is the leading supplier of content access software which combines intelligent retrieval techniques with the flexibility of graphical user interfaces. The PLS family of products is used today in on-line services, CD-ROM, Internet, and multi-media publishing, as well as in workgroup and enterprise applications. PLS can be reached at its headquarters at 2400 Research Blvd., Rockville, MD, 20850, (301) 990-1155, or by Internet at info@pls.com.

Dialog Information Services, Inc., a Knight-Ridder company, is the acknowledged world leader in electronic information access and delivery. The DIALOG service contains more than 450 databases, primarily in the business, news, scientific, and technical areas, used by over 155,000 customers in 100 countries. For more information on Dialog or its services, contact Dialog Sales at 3460 Hillview Avenue, Palo Alto, CA 94304, 800-3-DIALOG (800-334-2564; U.S. and Canada only) or 415-858-3785; fax 415-858-7069.

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DataTimes Selects Personal Library Software for New System

(Oklahoma City, OK, June 14, 1993) DataTimes Corporation, a leading provider of electronic library systems for newspapers, announced selection of a development partner for a natural language, text retrieval system for newspapers.

Personal Library Software of Rockville, MD, will provide the core search technology and graphical user interfaces for the system.

DataTimes said the Personal Library Software (PLS) natural language will make the DataTimes Library much easier for reporters and editors to use, while still providing library search professionals with all the tools they need to manage a very large database.

The new DataTimes Library Software will be on display during Nexpo '93, the newspaper equipment show being held at the New Orleans Convention Center on June 12 - 16. Representatives of DataTimes and Personal Library Software will be demonstrating the software in the Digital Equipment Corporation booth at the trade show.

DataTimes said its initial implementation of the library system will include a migration path for its existing Digital VAX/VMS software customers. DataTimes provides library and online marketing services for more than 100 North American publications, many using VAX computers. DataTimes indicated these users would be able to move to new Digital Alpha AXP processors in the future.

Prior to the public announcement, DataTimes said, each newspaper library customer was given a migration plan. DataTimes said the currently installed systems would be fully supported, but all future enhancements would be made to the PLS, natural-language system.

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Selection of PLS came after a year of evaluating software, according to John Paschal, DataTimes Vice President of Operations.

"We began our search for next-generation software with a Request for Proposal in May 1992," Paschal said. "The RFP was answered by 17 vendors, eight of which made our 'short list'. With the help of an independent system house, we bench-marked those eight using exhaustive criteria. PLS out-performed everyone."

DataTimes will add the data gathering, filtering, loading, enhancement and editing tools needed by the newspaper library, as well as writing character-based interfaces to meet the needs of those publications still using proprietary pre-press systems. These access methods will support the same natural-language searching available in the graphical user interfaces.

DataTimes has marketed a version of PLS for the past two years under the product name "PC DataTimes." "Future development of this product will be integrated into the total PLS/DataTimes development efforts," Paschal said. PC DataTimes was positioned for use by small and midsized dailies; the new DataTimes system will be available for newspapers of all sizes. Network software prices begin at about $5,000, with multi-user client, server software available for about $20,000.

"The exciting thing is that we now have a system that can be searched by reporters and editors without learning complex Boolean search strategy," said Ed Roach, newspaper marketing manager for DataTimes. "And, as newsrooms move away from proprietary pre-press systems, the library can come with them, since it can be run on various hardware."

"Newspapers are a great example of a business in which being able to get at accurate information is critical," said Dr. Matthew Koll, president of Personal Library Software. "Working with a leader like DataTimes helps us help reporters get their jobs done more effectively."

Personal Library Software is a leading supplier of text retrieval and document management software combining intelligent retrieval techniques with the flexibility of graphical user interfaces.

Personal Librarian manages large databases of text and images using a "natural language" approach to search and retrieval. PLS markets its Personal Librarian family of products on a variety of platforms, including Macintosh, MS-Windows/DOS, UNIX and VMS.

DataTimes is the provider of library systems and online marketing for newspapers, magazines, newswires and specialty publications in the U.S., Canada, Australia, Europe and Asia. DataTimes is largely owned by The Oklahoma Publishing Co., with a minority ownership by Dow Jones & Co.

NewsNet GUI, Enhanced System Features Debut at National Online Meeting

Point-and-Click Access, Concept Searching to be Available on NewsNet Service
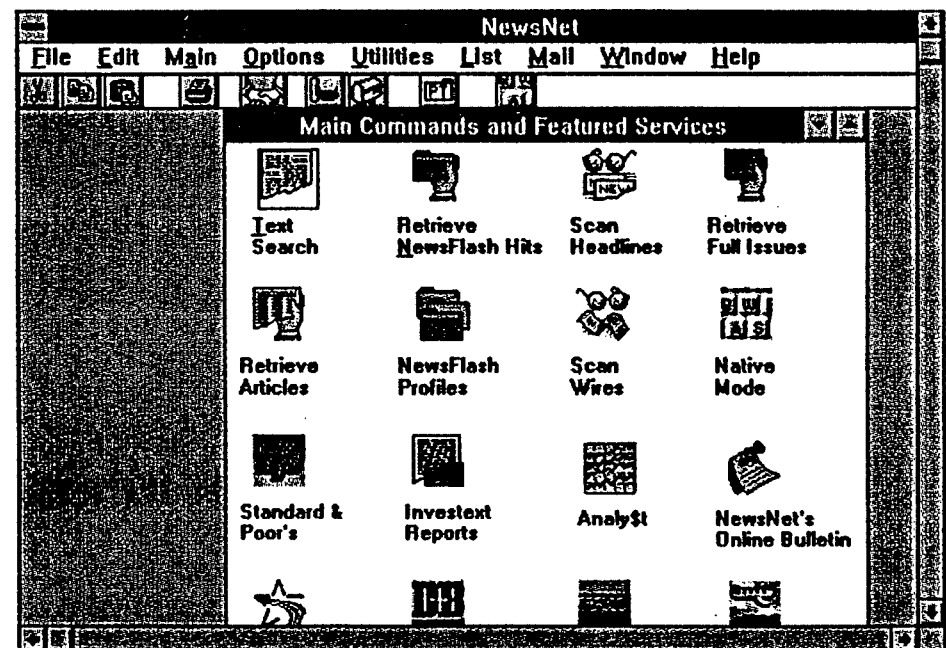
by David Hoffman

The GUIs are coming! Command line be gone! (Well . . . stay away unless wanted.) Online database services are reaching out to a broader clientele with Windows-based graphical user interfaces that provide easier access to their information banks. Among the most recent to arrive are those for MAID's Profound, Knight-Ridder's Custom DIALOG, and NewsNet's service. NewsNet's Baton GUI is being introduced this month at the National Online Meeting in New York. We had a preview of Baton and other enhancements to the NewsNet service prior to the Meeting.

Now front-end and revamped behind-the-scenes components of NewsNet include *Baton,* a graphical user interface

phobes; new file-server technology to provide more power and speed on the service; and both enhanced Boolean searching and natural-language concept searching features. NewsNet has licensed Personal Librarian Software (PLS) to beef up searching capabilities.

Orchestrate Your Own Search

Baton will look familiar to Windows users. Its main screen displays 16 icons representing commonly used pathways into NewsNet's databank of 800-plus information products. There's an icon to initiate a text search, of course, plus others for retrieval of hits from the NewsFlash clipping service, for scanning newswire or newsletter headlines, and for accessing reports from sources such as Dun & Bradstreet and Standard & Poor's.

Main Commands and Featured Services

Text Search   Retrieve NewsFlash Hits   Scan Headlines   Retrieve Full Issues

Retrieve Articles   NewsFlash Profiles   Scan Wires   Native Mode

Standard & Poor's   Investext Reports   Analy$t   NewsNet's Online Bulletin

NewsNet GUI

(continued from page 1)

Click on the text-search icon and dialog boxes prompt you to build your search criteria and choose your database sources (by title or subject, selection of date ranges, etc.) via point-and-click input. The process is decidedly more intuitive than it is in a non-GUI environment, enabling "generalist" information seekers to harness NewsNet features they might not otherwise have understood or tried.

Through *Baton*, users create a search statement off line, then click to connect to NewsNet and run the search. Results appear in a similar point-and-click environment with the same retrieval options as in a traditional NewsNet search, including previewing of results by headlines, lead paragraphs, and keyword in context (KWIC) displays.

cepts" through its ability to automatically add *related* words to the query. Type in "forest," and "tree" is likely to be included as part of the search concept.

Concepts are more than collections of synonyms, though. They are created through such techniques as statistical analysis of co-occurring terms. That means the PLS software sifts through a database and automatically "relates" words it finds *often* in *close proximity* to the plain English query words the user has typed in. During a concept search on "publishing and online services," we discovered that the term "House" was part of the concept built for our search. The process was transparent to us. "House" appeared because there had been frequent references in the database to Thomas, the House of Representatives' information access site published online on the Internet. Our search would turn up articles about Thomas in the chosen database regardless

Baton presents relevance rankings in bar-graph form for quick assessment.

NewsNet then ranks the articles turned up in a search by relevance. *Baton* displays the ranking visually, in a bar graph that quickly communicates what's worth checking out further.

For experienced searchers who prefer the precision of selecting specific codes from NewsNet's Reference Guide—and who don't mind looking up "Oil & Gas Interests Newsletter" and keying in EY04—one of *Baton's* icons, Native Mode, transports them to the traditional interface.

Behind the GUI front end, NewsNet is making other changes and improvements. Next month, the service will migrate away from its older mainframe systems to a new UNIX-based file-server technology, providing enhanced searching power and speed and enabling quicker deployment of new services, according to the company.

Concept Searches

The licensing of the PLS search engine will bring, among other things, concept searching capabilities to NewsNet information seekers, whether working through Baton or the command-line interface. In a concept search, users type their query in plain English (they're not confined to a finite set of keywords), and the search engine expands those words into "con-

of whether the exact words "publishing" and "online services" appeared in them.

PLS also gives NewsNet searchers a much expanded repertoire of Boolean terms, should they choose a Boolean rather than a concept search. For example, single-, multiple-, right hand-, and internal-word wildcarding, plus left-to-right and bi-directional proximity operators are among those available.
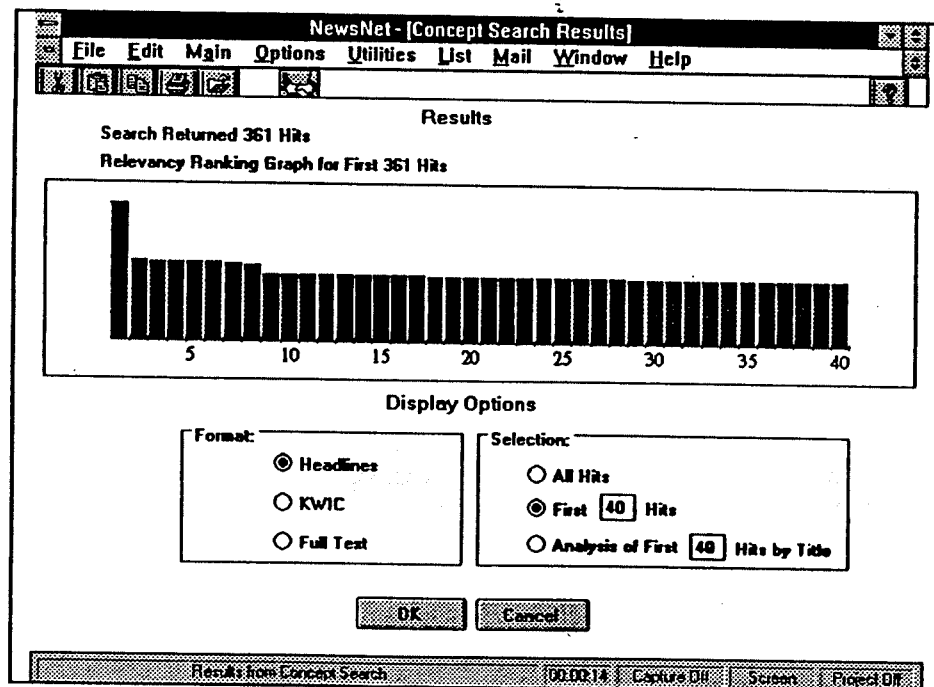
Getting There Sooner

According to NewsNet president Andrew Elston, with these more powerful and intuitive search capabilities plus relevance ranking, users should be able to find what they want within approximately the first 15 ranked articles. In keeping with NewsNet's focus on current awareness and timely business intelligence, these new features and analysis functions place extra emphasis on content from the 30 days preceding a given search.

Bryn Mawr, Pennsylvania-based NewsNet is demonstrating *Baton*, concept searching, and NewsNet's other enhancements throughout the National Online Meeting. Contact NewsNet at 800/345-1301, 800/952-0122, or 610/527-8030.
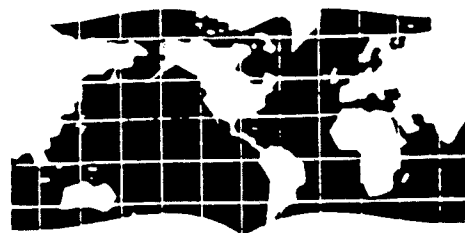

David Hoffman is editor of Information Today.

May 1995

Mar./Apr. 1995   Vol. 11, No. 2

Turning Information Into Intelligence

by Martin Goffman, Ph.D. and Rouget (Rick) Henschel, Ph.D.

We need help! Experienced information professionals doing on-line searching of large databases on common topics suffer from an overload of relevant information. How does one separate the most relevant from the almost-relevant to the non-relevant?

For example, it would not be uncommon when performing a patent validity search to locate 1000 or even more relevant citations that *may* invalidate the patent in question or show infringement upon another patent. Assume, for the moment, that cost is not the primary constraint. Traditional Boolean search strategies may produce either a broad or a focused result, as the searcher desires.

Non-Boolean search tools, such as Target in Dialog, while appropriate in some cases, are not suitable in many of the diverse situations encountered. Target is still limited by the initial choice of words used by the searcher. It is left to the knowledge and experience of the search expert to understand the limitations of each approach and to apply the best solution to the problem at hand.

New Software to the Rescue

Now, the professional searcher has another tool at his or her disposal: Personal Librarian, from Personal Library Software. Personal Librarian can be many things to many people, but this article is not intended to be a review of the software. We will leave that to others. In this article we will point out instances where we believe the software provides the ability to locate information that would be difficult or impossible to find without it. The software reduces the likelihood of the searcher's not pointing out the most relevant citation (the so-called "smoking gun") to the client - not because of non-retrieval, but because of missing its relevance to the issue in question. In other words, Personal Librarian can help turn information into intelligence.

Boolean searching, even when used by searchers with exceptional abilities and experience, will only retrieve citations with at least a single instance of the search term. Hence, the large number of "hits" on a particular common term. This is fine as long as the term we use in our input is also used in the unknown citation we need. But suppose that the term we anticipated is not used and a lesser known or peculiar term is substituted. That could cause us to miss the single paper containing the prior art we need.

To reduce the number of "hits" we generally find ourselves "narrowing" the search by introducing additional search terms, using index terms, descriptors,

In This Issue. . .

We examine two new search tools that can expand and possibly improve a searcher's ability to do the best job for a client: Personal Librarian from Personal Library Software as used with Dialog (now Knight Ridder Information Services) and Questel-Orbit's PowerIndex.

We also welcome two new columnists. Steve Coffman introduces himself in his first column on *The Library Sector*. In upcoming newsletters, Steve will address some of the issues facing library-based information brokerages and how they relate to independent information brokers. And Carl Ernst, editor-in-chief at BRB Publications (publishers of *The Public Records Research Library*), writes about liens in this issue. He will continue to enlighten us about public records searching.

Turning Information Into Intelligence

(Continued from page 1)

and so forth. In the case of patents, we might add classification codes and/or the Art Unit, and even at times, a particular examiner. This, unfortunately, means that we will miss a great deal of the material that _may_ be crucial to the problem at hand. The other alternative is, of course, to sort through the large number of "hits" manually to find those most relevant. This is quite tedious and costly, but more importantly, one can easily miss a significant citation.

Database Search Aids Are Not Always Enough

There are extensive aids available on a system such as Dialog, but a major problem is finding the relevant information when you may not know the "right" words or the words used to describe an invention in the context of the patent. Patent law permits the inventor to be his own lexicographer (_Manual of Patent Examining Procedure_, Section 608.01g).

Writers of patents may deliberately use alternative words to describe an invention in order to broaden the coverage, or even, in some cases, so that novices have difficulty finding "prior art" which may invalidate the patent. Rank and Target are available to us on Dialog. Rank requires either indexing or descriptor terms. Target requires that at least one of the query terms be present in the document for retrieval.

"Smarter" Searching

We need to search smarter! We need to address the subtle nature of the way we use the English language. We really need to search concepts. We need the interaction between the human brain and the computerized retrieval of the information. Personal Librarian provides some of this capability now.

Dialog's Target provides relevancy ranking by an algorithm based on several factors. One is the number of occurrences of the query terms that appear in the particular record compared with the number of times that term appears in the database. A record with all of the query terms will be more relevant than one with just some of the query terms. The closer the proximity of the query terms to each other, the higher the relevancy, too. What Target does not provide is a list of alternative search terms based on the information (words) contained in the articles themselves. This relevance feedback, called concept searching, is quite powerful since it uses the words in the context of the article itself to provide the alternative search terms. This is the support that Personal Librarian provides.

Using Personal Librarian

Let's see what is involved in using Personal Librarian to enhance a Dialog search for a patent study on "air bags."

Our search strategy in this case was: "(air()bag? ?) or (passive()restraint? ?)" in patent Files 25 and 125 and Compendex Plus File 8. For purposes of this article we downloaded the 500 most recent citations in Format 5 for the two patent files and Format 9 for Compendex. (We did say that cost was not a factor in this search.) For a client, of course, we would use the full text patent files with all of the claims, too, along with many others in the technical literature and retrieve significantly more records.

Step One

The first step is to download records in TAG format. We must then re-format the Dialog tagged records into the Personal Librarian format. Each field must have a hyphen field tag hyphen preceding the text, for example -AB- for the abstract field and -PN- for the Patent Number field. The End-of-Record marker is -END-. This is a relatively simple process which can be done within your favorite word processor using a macro and the search and replace function. Images are handled by an Image Link which uses Personal Librarian's integrated viewer to display monochrome images in uncompressed TIFF and compressed TIFF group 3 & 4.

Step Two

We must now create an external index to the records. This is done automatically by the software administrator module once you decide on the fields you wish included as searchable fields. You may designate any field as searchable, or, if you prefer, some fields may be designated as being for display only. We prefer to include all tagged fields as named and searchable to provide the most flexibility in our searching. Be certain that you comply with all applicable copyright laws in the use of this newly created database. Refer to the terms and conditions of the Vendor Service Agreement.

Step Three

Now we're ready for our research investigation.

Using this Personal Librarian database to examine the retrieved citations is a delight. Upon loading the database (and you may combine separate databases if you wish) you are presented with a "search window" in which you place your search strategy. By default, the search terms are "ORed" together, although the user may change this default.

Once the search is input, the user has a number of options. The most useful feature is the "concept" search. This alternative not only searches the terms input as the search strategy, but now provides an extremely useful list of alternative terms in a window titled "Related To" which might be useful in a further search strategy. This window is one of four shown in Figure 1. The algorithm produces this list of words based on those contained in the documents themselves. This new list of suggested words offers new

...athways to additional informa-
tion in the database. If desired,
the search can be limited to only
certain fields, just as on Dialog it-
elf.

The software is also able to pro-
ide a "fuzzy match" list. This
list contains words similar in spell-
ing to a specified word.

Figure 1 shows our search win-
dow containing our now-refined
search. We have focused the 500
retrieved records on those contain-
ing the most relevant information
about the air bag sensor and the
exploding device. From our ini-
tial input of sensor and explosion,
the words "generant", "deforma-
tion", "triggering", "sensors",
and "piezoelectric", were added
from the "related to" list. We
could have used some of the
others too. The "fuzzy match"
list contains alternatives to sensor
such as "sensors" and "senses"
also present in these documents
which might be helpful.

The bars in the records window
rank the records in relevancy
order. Any of these records may
be easily seen by simply double
clicking with the mouse on any
record in the list of hits. One
may also view a record by double
clicking on one of the bars.

Step Four

After examining the records in
the first search and adding the
newly suggested search terms,
one runs the search again. Terms
can be added or removed and the
search output examined carefully.
It is entirely possible that even
with a generic search such as
ours, additional search terms may
yield valuable additional informa-
tion. In the case here, airbag or
airbags (no space) is present in
many of the records. Using these
in our original would certainly
have improved the quality of the
search but also significantly in-
creased the number of hits we
would need to examine.

Conclusion

Personal Librarian has many
more capabilities than those cited
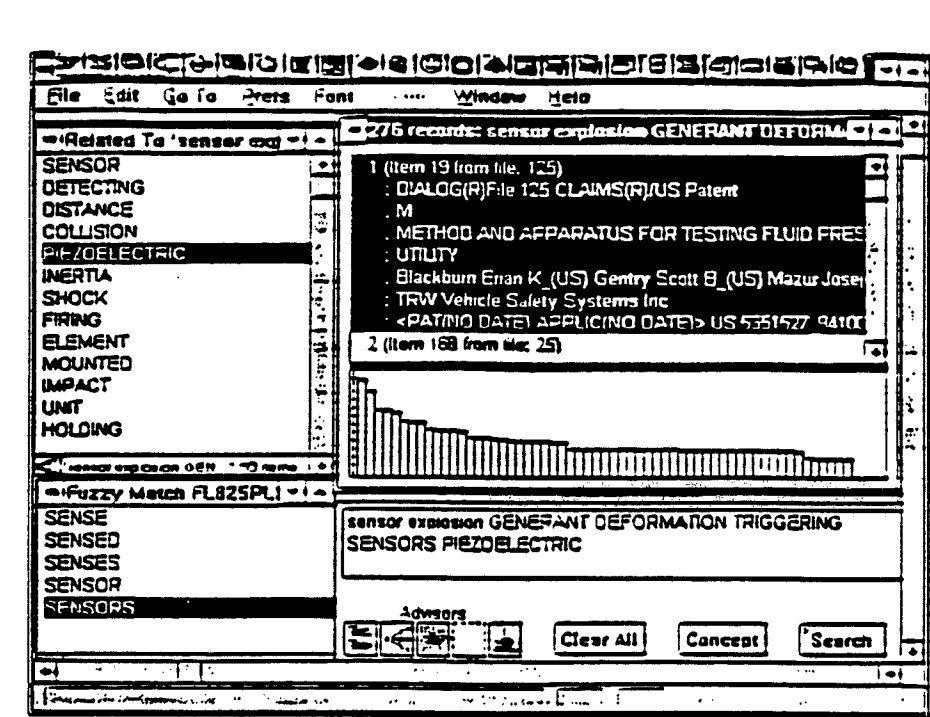here. One particularly nice fea-

Figure 1

ture is the Query By Example
(QBE) feature. With this it is
possible to select a paragraph or
even an entire article from the list
of hits and include it in the
search. Personal Librarian is an
extension which can be con-
figured in many different ways.
In this article we have only
touched the surface of a few fea-
tures.

It would be exciting to see the
Personal Librarian software as
part of the Dialog search engine
so that we could include the addi-
tional suggested terms in our
search automatically, search the
entire on-line database(s), and
download (and pay for) only those
found most relevant. Vendors
such as America On-Line, CQ,
and DataTimes have already
done so.

Is using Personal Librarian in
this way the answer to all of the
information professional's needs?
We feel Personal Librarian is an
extremely valuable tool to be used
along with _all_ of the others avail-
able to us, Rank, Target, Map,
etc. It's certainly helpful and
needed for some very specific ap-
plications. As always, it is left to
the information professional to

decide on the best solution to any
given problem.

(The authors would like to
thank Mr. David Macdonald and
Ms. Mary Hyman of Personal
Library Software for their assis-
tance in reviewing this article.)

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